

CLAIMS

What is claimed is:

1. A multimedia distribution network comprising a plurality of set-top-boxes (STBs) adapted to request a multimedia channel, the network comprising:

a content server;

a distribution unit; and

a use meter, the use meter is adapted to monitor channel requests and evaluate information associated with the channel requests to determine viewing habits and subscriber interests of viewers for each of the plurality of STBs.

2. The network according to claim 1, wherein the content server is adapted to receive and manage a plurality of multimedia transmissions from at least one satellite receiver, the plurality of multimedia transmissions each comprising a plurality of multimedia channels.

3. The network according to claim 1, wherein the distribution unit is adapted to independently transmit on-demand a requested multimedia channel and an associated requested corresponding bandwidth to each of the plurality of STBs.

4. The network according to claim 1, wherein each of the plurality of end-user STBs is adapted to independently request a multimedia channel, wherein the distribution unit is adapted to acquire each requested multimedia channel from the content server and independently transmit each requested multimedia channel respectively to each requesting STB on-demand.

5. The network according to claim 1, further comprising a use memory, the use memory is adapted to store monitored channel request information corresponding to each of the plurality of STBs for evaluation, the use memory is also adapted to record a length of viewing time corresponding to each channel request, wherein the use memory is also adapted to record the bandwidth consumed corresponding to each respective channel request.

6. The network according to claim 1, further comprising a use memory, wherein the use meter is adapted to create and populate a plurality of user logs in the use memory, the user logs are adapted to store monitored channel request information, bandwidth consumed for each corresponding channel request, and length of viewing time of multimedia channel information for each of the plurality of STBs.

7. The network according to claim 6, wherein the user logs comprise at least one of a channel identification number, a channel viewing beginning time, a channel viewing ending time, bandwidth consumed corresponding to a requested channel, a viewed program identification number, a likely viewer identification number, failed channel requests, additional programs viewed on a displayed channel when the displayed channel is displayed for longer than a single initial program length, advertisers displaying advertisements during viewed programs, subject matter associated with the viewed programs, product placement in the viewed programs, and targeted marketing information associated with the viewed programs and advertisements.

8. The network according to claim 1, wherein the distribution unit is adapted to communicate with each of the plurality of STBs via one of a wire or wirelessly, the distribution unit comprises a plurality of transmission heads, each of the transmission heads comprising at least one of mechanical, electrical, and electronic switches and relays adapted to maintain continuous communication with each of the STBs at a plurality of end-user locations.

9. The network according to claim 1, wherein the distribution unit is adapted to communicate with each of the plurality of STBs via one of a wireless receiver, a wired receiver, an optical receiver, a wireless transmitter, an optical transmitter, and a wired transmitter.

10. The network according to claim 1, further comprising a subscriber database memory storing subscriber information for each of a plurality of end-user subscribers, the subscriber database memory comprising at least one of a listing of channels subscribed, STB identification information, subscriber spending limits, subscriber modifiable information, and subscriber identity information for authentication.

11. The network according to claim 1, wherein each STB is adapted to permit a subscriber end-user to unsubscribe to subscribed programming channels by selecting a corresponding response from an interactive menu displayed by the STB on an end-user display apparatus, wherein the selected response is transmitted to a network component for processing.

12. The network according to claim 1, wherein each STB is adapted to permit a subscriber end-user to view information stored in a subscriber memory database corresponding to the subscriber end-user, and the STB is adapted to permit the subscriber end-user to view at least one of end-user preferences, subscription status, collected statistics, and viewing habits on an end-user display apparatus on-demand, wherein the information is transmitted to the STB from a network component.

13. The network according to claim 1, wherein multimedia information is communicated to the STB via one of a cable, an optical fiber, and wirelessly.

14. The network according to claim 1, wherein the STB is adapted to detect whether an end-user display apparatus is one of active and inactive, the STB is also adapted to transmit a message to the network, the message indicating whether the display apparatus is one of active and inactive, wherein multimedia transmission is terminated when the display apparatus is determined to be inactive.

15. The network according to claim 14, wherein detecting whether the end-user display apparatus is one of active and inactive comprises evaluating at least one component of the end-user display apparatus by the STB.

16. The network according to claim 1, wherein the STB is adapted to determine whether an end-user is physically viewing transmitted multimedia information, wherein upon determining that the end-user is not physically viewing the transmitted multimedia information, the STB transmits a message to the network indicating that the end-user is not physically viewing the multimedia information, wherein transmission of multimedia information is terminated.

17. The network according to claim 16, wherein determining whether an end-user is physically viewing the transmitted multimedia information comprises prompting the end-user to interact with the STB.

18. The network according to claim 1, wherein a subscriber database stores previous subscriber information and settings for subscribers not currently subscribed to a multimedia information package offered by the network.

19. The network according to claim 1, wherein a subscriber database stores user preferences for value added services, wherein the service levels are selected from at least one of gold, silver, and bronze service levels, and wherein the service levels are used to determine an amount of advertisements to be displayed on a subscriber end-user display apparatus.

20. The network according to claim 1, wherein the content server is adapted to select and transmit advertisements targeted based upon a user profile stored in the subscriber database, wherein targeted advertisements comprise advertisements corresponding to at least one of a subscriber personal information, a subscriber employment information, a subscriber channel viewing habits, and determined subscriber interests.

21. The network according to claim 1, wherein the content server is adapted to transmit a message to the STB informing an end-user that a selected channel is unavailable for access due to one of unavailability of a requested channel from a satellite and unavailability of the requested channel due to the requested channel being restricted channel to select end-users.

22. A set-top-box (STB) adapted to request a multimedia channel from a multimedia distribution network, the STB comprising:

- a processor for processing and managing at least one of channel requests, bandwidth requested, and multimedia channel information;

- an audio decoder for decoding audio information received via an encoded multimedia channel transmission;

- a video decoder for decoding video information received via an encoded multimedia channel transmission;

- a data decoder for decoding data from one of the network and the Internet;

- a transmitter for transmitting channel requests to the multimedia distribution network; and

- a receiver for receiving multimedia channel information and messages associated with the channel requests.

23 The STB according to claim 22, further comprising an antenna for wirelessly communicating with a multimedia distribution unit in the multimedia distribution network.

24 The STB according to claim 22, further comprising a wired connection for communicating with a multimedia distribution unit in the multimedia distribution network.

25. The STB according to claim 22, further comprising a combination audio/video decoder unit, the combination audio/video decoder unit comprising the audio decoder and the video decoder.

26. The STB according to claim 22, further comprising a combination transmitter/receiver unit, the combination transmitter/receiver unit comprising the transmitter and the receiver.

27. The STB according to claim 22, wherein the STB is adapted to permit a subscriber end-user to unsubscribe to subscribed programming channels by selecting a corresponding response from an interactive menu displayed by the STB on an end-user display apparatus, wherein the STB transmits the corresponding response to a network component for processing.

28. The STB according to claim 22, wherein the STB is adapted to permit a subscriber end-user to access and view information stored in a subscriber memory database corresponding to the subscriber end-user and the end-user STB, and the STB is adapted to permit the subscriber end-user to view at least one of end-user preferences, subscription status, collected statistics, and viewing habits on a display apparatus on-demand, wherein the information is received by the STB from a network component.

29. The STB according to claim 22, wherein the multimedia information provider communicates to the STB via one of a cable, an optical fiber, and wirelessly.

30. The STB according to claim 22, wherein the STB is adapted to detect whether an end-user display apparatus is one of active and inactive, the STB is adapted to transmit a message to the network, the message indicating whether the display apparatus is one of active and inactive, wherein multimedia distribution is terminated when the display apparatus is determined to be inactive.

31. The STB according to claim 22, wherein detecting whether the end-user display apparatus is one of active and inactive comprises evaluating at least one component of the end-user display apparatus.

32. The STB according to claim 22, wherein the STB is adapted to determine whether an end-user is physically viewing transmitted multimedia information, wherein upon determining that the end-user is not physically viewing the transmitted multimedia information, the STB transmits a message to the network indicating that the end-user is not physically viewing the multimedia information, wherein transmission of multimedia information is terminated.

33. The STB according to claim 32, wherein determining whether an end-user is physically viewing the transmitted multimedia information comprises prompting the end-user to interact with the STB.

34. The STB according to claim 22, wherein a subscriber database stores previous subscriber information and settings for subscribers not currently subscribed to a multimedia information package offered by the network.

35. The STB according to claim 22, wherein a subscriber database stores user preferences for value added services, wherein the service levels are selected from at least one of gold, silver, and bronze service levels, and wherein the service levels are used to determine an amount of advertisements to be displayed on a subscriber end-user display apparatus.

36. The STB according to claim 22, wherein the content server is adapted to select and transmit advertisements targeted based upon a user profile stored in the subscriber database, wherein targeted advertisements comprise advertisements corresponding to at least one of a subscriber personal information, a subscriber employment information, a subscriber channel viewing habits, and determined subscriber interests.

37. The STB according to claim 22, wherein the content server is adapted to transmit a message to the STB informing an end-user that a selected channel is unavailable for access due to one of unavailability of a requested channel from a satellite and unavailability of the requested channel due to the requested channel being restricted channel to select end-users.

38. A method of determining viewing habits of a plurality multimedia channel subscribers, the method comprising:

monitoring multimedia usage by each of the plurality of multimedia channel subscribers, wherein monitoring multimedia usage comprises:

monitoring channel requests received from each of a plurality of set-top-boxes (STBs);

monitoring multimedia channel information transmitted to each of the plurality of multimedia channel subscribers and corresponding STBs;

monitoring channel transmission beginning and ending times;

monitoring bandwidth consumed for each channel viewed;

storing monitored multimedia channel information; and

analyzing the monitored multimedia channel information to determine subscriber viewing habits.

39. The method according to claim 38, wherein storing monitored multimedia channel information comprises creating a plurality of user logs of subscriber viewing activity in a use memory, wherein each of the plurality of user logs corresponds to one of a subscriber and multiple viewers at each end-user location.

40. The method according to claim 39, wherein the user logs comprise at least one of channel requests received, length of time of channel transmission, a channel identification number, a channel viewing beginning time, a channel viewing ending time, bandwidth consumed, a viewed program identification number, a likely viewer identification number, failed channel requests, additional programs viewed on a displayed channel when the displayed channel is displayed for longer than a single initial program length, advertisers displaying advertisements during viewed programs, subject matter associated with the viewed programs, product placement in the viewed programs, and targeted marketing information associated with the viewed programs.

41. The method according to claim 40, wherein all channel requests for a particular channel and a particular subscriber from each of the plurality of user logs is combined to create an aggregate entry stored in one of a corresponding channel log and a corresponding subscriber log.

42. The method according to claim 38, further comprising comparing the monitored multimedia channel information against a program listing for channels and times to determine viewing habits of end-user subscribers, wherein determining viewing habits of end-user subscribers comprises determining programs and corresponding subject matter of the programs subscribers request and view.

43. The method according to claim 38, further comprising analyzing channel requests and corresponding multimedia channel transmission information to determine program information and end-user viewer information.

44. The method according to claim 38, further comprising:

detecting whether a display apparatus at a corresponding end-user subscriber location is one of active and inactive; and

terminating channel transmission upon determining that the display apparatus is inactive.

45. The method according to claim 38, further comprising:

detecting whether a display apparatus at a corresponding end-user subscriber location is one of active and inactive; and

transmitting a message indicating that the display apparatus at the corresponding end-user subscriber location is one of active and inactive.

46. The method according to claim 38, further comprising detecting whether a display apparatus at a corresponding end-user subscriber location is one of active and inactive, wherein detecting comprises evaluating at least one component of the display apparatus.

47. The method according to claim 38, further comprising determining whether an end-user subscriber is viewing an active display apparatus at a corresponding end-user subscriber location, wherein determining comprises prompting the end-user subscriber to interact with a corresponding STB.

48. The method according to claim 38, further comprising determining whether an end-user subscriber is viewing an active display apparatus at a corresponding end-user subscriber location, wherein upon determining that the end-user subscriber is not viewing the active display apparatus, terminating channel transmission.

49. The method according to claim 38, further comprising:

determining whether an end-user subscriber is viewing an active display apparatus at a corresponding end-user subscriber location; and

transmitting a message indicating that the end-user subscriber is viewing the active display apparatus at the corresponding end-user subscriber location.

50. The method according to claim 38, further comprising determining subscriber interests by evaluating subscriber viewing habits stored in at least one user log.

51. The method according to claim 38, further comprising reducing total bandwidth transmitted to each subscriber by transmitting multimedia channel information selected by each subscriber independently.

52. The method according to claim 38, further comprising increasing transmitted multimedia channel quality by increasing bandwidth transmitted for each requested multimedia channel selected by each subscriber independently.

53. The method according to claim 38, further comprising target marketing each end-user subscriber with product information based upon analysis of end-user subscriber viewing habits and determination of end-user subscriber interests, wherein the product information may be displayed on the end-user display apparatus.

54. The method according to claim 38, further comprising determining by analysis of subscriber viewing habits whether a subscriber is channel surfing.

55. The method according to claim 54, wherein subscriber channel surfing is determined by:

counting channel requests transmitted in a predetermined amount of time; and

comparing the counted number of channel requests received in a predetermined amount of time with a predetermined number of channel requests, wherein if the counted number of channel requests is greater than the predetermined number of channel requests, then the subscriber is determined to be channel surfing, wherein a channel surfing entry in a user log is created, and wherein a channel surfing entry in the user log comprises at least starting and ending times of a channel surfing event.

56. The method according to claim 54, wherein subscriber channel surfing is determined by:

recording a length of viewing time associated with each channel request; and

comparing the length of viewing time with a predetermined time, wherein if the length of viewing time is less than the predetermined time, then the subscriber is determined to be channel surfing, wherein a channel surfing entry in a user log is created, and wherein a channel surfing entry in the user log comprises at least starting and ending times of a channel surfing event.

57. The method according to claim 38, wherein the STB is adapted to permit a subscriber end-user to unsubscribe to subscribed programming channels by selecting a corresponding response from an interactive menu displayed by the STB on an end-user display apparatus, wherein the selected response is transmitted to a network component for processing.

58. The method according to claim 38, wherein the STB is adapted to permit a subscriber end-user to view information stored in a subscriber memory database corresponding to the subscriber end-user, and the STB is adapted to permit the subscriber end-user to view at least one of end-user preferences, subscription status, collected statistics, and viewing habits on a display apparatus on-demand, wherein the information is transmitted to an end-user STB from a network component.

59. The method according to claim 38, wherein the multimedia information provider is adapted to communicate to the STB via one of a cable, an optical fiber, and wirelessly.

60. The method according to claim 38, wherein a subscriber database stores previous subscriber information and settings for subscribers not currently subscribed to a multimedia information package offered by the network.

61. The method according to claim 38, wherein a subscriber database stores user preferences for value added services, wherein the service levels are selected from at least one of gold, silver, and bronze service levels, and wherein the service levels are used to determine an amount of advertisements to be displayed on a subscriber end-user display apparatus.

62. The method according to claim 38, wherein the content server is adapted to select and transmit advertisements targeted based upon a user profile stored in the subscriber database, wherein targeted advertisements comprise advertisements corresponding to at least one of a subscriber personal information, a subscriber employment information, a subscriber channel viewing habits, and determined subscriber interests.

63. The method according to claim 38, wherein the content server is adapted to transmit a message to the STB informing an end-user that a selected channel is unavailable for access due to one of unavailability of a requested channel from a satellite and unavailability of the requested channel due to the requested channel being restricted channel to select end-users.